A SOCKS5 proxy for slowing down connections

Introduction

We need a way to load websites simulating a slow network. And no, we can't use Chrome's network simulator.

Project goal

To have some startup scripts that can setup a Google Cloud virtual machine with the following characteristics:
- Two public network interfaces, which for convenience *in the scope of this document* we will name ethS and ethO. The actual name of the network interfaces in the virtual machines can be different.
- One of the network interfaces, ethS, should have an arbitrary Netem command applied to them. The netem command or a placeholder for it should be clearly demarcated in your deliverables.
- There should be a SOCKS5 process listening in an IPv4 address bound to ethS; connections coming to SOCKS5 should be serviced through ethO, *not through* ethS.

Notice that the goal is that our tools can fetch sites by connecting to the SOCKS5 proxy. If we request a file from, say, www.example.com, the SOCKS5 proxy software should manage for the file to arrive through the ethO interface to the virtual machine that this script configures, and then the proxy would send the file back to our tools via the ethS interface with the Netem command applied to it, e.g. with controlled bandwidth or latency.

Important: *the SOCKS5 proxy should be protocol-agnostic. We are not interested in an HTTP proxy including SOCKS5 support, like Squid. That in fact wouldn't work for us.*

Note that there is a PDF with a diagram[1] denoting what we need (see also next page).
A big part of this task is finding and selecting a suitable SOCKS5 proxy that admits this type of setup, but you may start using a server configuration with Dante[2].

Deliverables

You should deliver working configuration for the goal stated above in the form of the following:
- A gcloud command to create a virtual machine with the two network interfaces ethS and ethO
- A Google Cloud startup script[3] in bash or Python that creates the setup described above.

Can I use your gcloud credentials for this task?

No, we store sensitive business objects there. But you can create your own google cloud account and use some credit to experiment. It shouldn't cost you more than 10 USD.

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[1] https://drive.google.com/file/d/1UDaWVQkU6GZ7YNc-3JAMZD_p5jeuQ9rj/view?usp=sharing
[2] http://www.inet.no/dante/doc/1.4.x/config/server.html
[3] See here: https://cloud.google.com/compute/docs/startupscript

SOCKS5 Proxy to slow down traffic

shared user | May 31, 2019

SOCKS5 Proxy

Our tools connect to ethS via SOCK5 and receive slow traffic from there

Traffic shaped by Netem

ethS

Virtual Machine

ethO

Normal unshaped traffic

Internet